What is Claimed:

1. A filtering system having a probe for coupling two resonators comprising

an iris having the probe disposed therein coupled between the two resonators; and

the probe having a transverse opening for receiving a tuning conductor,

wherein the tuning conductor provides adjustable coupling between the two resonators.

2. The system of claim 1 wherein

the tuning conductor is grounded at one end and provides a capacitive coupling to ground between the two resonators.

3. The system of claim 1 wherein

the tuning conductor is transversely oriented to the probe, and

fixedly movable in the transverse opening of the probe to provide an adjustable capacitance between the two resonators.

4. The system of claim 1 wherein

the tuning conductor is a center conductor of a coax line.

5. The system of claim 4 wherein

the coax line includes an outer dielectric sleeve, a coax shell, and a shrink tubing, each surrounding the tuning conductor.

6. The system of claim 1 wherein

the tuning conductor is electrically insulated from the probe by a dielectric material.

7. The system of claim 1 wherein

the tuning conductor is inserted in a transverse opening in a septum separating the two resonators, and

the transverse opening of the septum is aligned to the transverse opening of the probe.

8. The system of claim 1 wherein

the tuning conductor is surrounded by a coax shell, the coax shell electrically connected to the probe, and

the probe is electrically insulated from the tuning conductor.

9. The system of claim 1 wherein

each of the two resonators includes a resonating rod disposed in a waveguide section.

10. The system of claim 1 wherein

each of the two resonators includes a waveguide cavity.

11. The system of claim 1 wherein

each of the two resonators includes a dielectric resonator.

12. The system of claim 1 wherein

the tuning conductor is adjustably fixed with respect to the probe by a set screw.

13. The system of claim 1 wherein

the probe includes an end disposed in one of the two resonators, and

the end of the probe and the one resonator form a capacitor.

14. The system of claim 1 wherein

the probe includes an end disposed in one of the two resonators, and

the end of the probe is coupled to a ground potential by a wire loop, the wire loop forming a coil.

15. A filtering system having a plurality of resonators comprising

at least one probe extending between two resonators of the plurality of resonators, and

a tuning conductor transversely oriented to the probe,

wherein the tuning conductor provides adjustable coupling between the two resonators.

16. The system of claim 15 wherein

the tuning conductor is grounded at one end and provides a variable capacitance to ground between the two resonators.

17. The system of claim 15 wherein

the tuning conductor is received in a transverse opening of the probe, and

the tuning conductor is electrically insulated from the probe.

18. The system of claim 15 wherein

the two resonators are separated by a septum, and

the septum includes an iris for supporting the probe between the two resonators.

19. The system of claim 15 wherein

each of the two resonators includes a resonating rod disposed in a waveguide section.

20. The system of claim 15 wherein

each of the two resonators includes a dielectric resonator disposed in a resonating cavity.

21. The system of claim 15 wherein

each of the two resonators includes a resonating cavity.